

State of Oregon
Department of Environmental Quality

Memorandum

To: Dana Bayuk Date: March 31, 2009
From: Rob Burkhart
Subject: Discharge Limitations and Monitoring Requirements for the NW Natural/Gasco Site

The following are the draft discharge limitations and minimum monitoring requirement for the NW Natural/Gasco site. Please note that these are draft and may change upon further review.

The discharge limitations were derived using the methods described in the Department's Internal Management Directive for Toxicity Reasonable Potential Analysis. The effluent values used were those provided by NW Natural's consultants in their report on the bench level treatment testing. The monitoring parameters listed are, for the most part, the same as those DEQ provided to NW Natural in the fall of 2006. Based on our discussions, additional parameters have been included due to data and/or information that became available after the initial list was developed.

It should be noted that there may soon be a requirement for certain dischargers in the Willamette Basin to implement enhanced monitoring for mercury and methyl mercury. At this time it is not known whether this requirement would apply to the NW Natural/Gasco site.

Discharge Limitations		
Parameter	Monthly Average	Daily Maximum
Benzene	0.66 ($\mu\text{g/L}$)	1.1 ($\mu\text{g/L}$)
Benzo(a)Anthracene	Not to exceed EPA Method 625 Quantitation Limit of 1 $\mu\text{g/L}$	
Benzo(a)Pyrene	Not to exceed EPA Method 625 Quantitation Limit of 1 $\mu\text{g/L}$	
Benzo(b)Flouranthene	Not to exceed EPA Method 625 Quantitation Limit of 1 $\mu\text{g/L}$	
Benzo(k)Flouranthene	Not to exceed EPA Method 625 Quantitation Limit of 1 $\mu\text{g/L}$	
Copper	Not to exceed EPA Method 200.8 Quantitation Limit of 10 $\mu\text{g/L}$	17.7 ($\mu\text{g/L}$)
Chromium VI	Not to exceed EPA Method 218.6 Quantitation Limit of 10 $\mu\text{g/L}$	16 ($\mu\text{g/L}$)
Chrysene	Not to exceed EPA Method 625 Quantitation Limit of 1 $\mu\text{g/L}$	
Free Cyanide	Not to exceed ASTM Method 4282-95 Quantitation Limit of 10 $\mu\text{g/L}$	
Dibenzo(a,h)Anthracene	Not to exceed EPA Method 625 Quantitation Limit of 1 $\mu\text{g/L}$	
Indeno(1,2,3-Cd)Pyrene	Not to exceed EPA Method 625 Quantitation Limit of 1 $\mu\text{g/L}$	
Iron (Dissolved)	300.0 ($\mu\text{g/L}$)	520 ($\mu\text{g/L}$)
Manganese (Dissolved)	50.0 ($\mu\text{g/L}$)	86.6 ($\mu\text{g/L}$)
Mercury	Not to exceed EPA Method 245.7 Quantitation Limit of 0.01 $\mu\text{g/L}$	
Pentachlorophenol	Not to exceed EPA Method 625 Quantitation Limit of 2 $\mu\text{g/L}$	
pH	6.5 S.U.	8.5 S.U.
Temperature	7-day Avg. of the Daily Maximums Not to Exceed 68 °F	

Parameter	Minimum Monitoring		
	Minimum Frequency		Sample Type
	During Pilot Study	All Other Periods	
Volume Discharged	Daily, when discharging	Daily, when discharging	Metering
Temperature	Daily, when discharging	Daily, when discharging	Recorder
Bioassay Testing	-	Annual	Grab
Outfall Pipe	-	Annual	Inspection
pH	Weekly, when discharging	Monthly, when discharging	Grab
Hardness	Weekly, when discharging	Monthly, when discharging	Grab
Free Cyanide	Weekly, when discharging	Monthly, when discharging	Grab
Total Cyanide	Weekly, when discharging	Monthly, when discharging	Grab
Available Cyanide	Weekly, when discharging	Monthly, when discharging	Grab
Weak-acid Dissociable Cyanide	Weekly, when discharging	Monthly, when discharging	Grab
PAHs			
Acenaphthylene	Weekly, when discharging	Monthly, when discharging	Grab
Acenaphthene	Weekly, when discharging	Monthly, when discharging	Grab
Anthracene	Weekly, when discharging	Monthly, when discharging	Grab
Benzo(a)Anthracene	Weekly, when discharging	Monthly, when discharging	Grab
Benzo(a)Pyrene	Weekly, when discharging	Monthly, when discharging	Grab
Benzo(b)Flouranthene	Weekly, when discharging	Monthly, when discharging	Grab
Benzo(k)Flouranthene	Weekly, when discharging	Monthly, when discharging	Grab
Carbazole	Weekly, when discharging	Monthly, when discharging	Grab
Chrysene	Weekly, when discharging	Monthly, when discharging	Grab
Dibenzo(a,h)Anthracene	Weekly, when discharging	Monthly, when discharging	Grab
Dibenzofuran	Weekly, when discharging	Monthly, when discharging	Grab
Flouranthene	Weekly, when discharging	Monthly, when discharging	Grab
Flourene	Weekly, when discharging	Monthly, when discharging	Grab
Indeno(1,2,3-Cd) Pyrene	Weekly, when discharging	Monthly, when discharging	Grab
2-Methylnaphthalene	Weekly, when discharging	Monthly, when discharging	Grab
Naphthalene	Weekly, when discharging	Monthly, when discharging	Grab
Pyrene	Weekly, when discharging	Monthly, when discharging	Grab
Metals			
Arsenic (organic)	Weekly, when discharging	Monthly, when discharging	Grab
Arsenic (inorganic)	Weekly, when discharging	Monthly, when discharging	Grab
Cadmium	Weekly, when discharging	Monthly, when discharging	Grab
Chromium III	Weekly, when discharging	Monthly, when discharging	Grab
Chromium VI	Weekly, when discharging	Monthly, when discharging	Grab
Copper	Weekly, when discharging	Monthly, when discharging	Grab
Iron (dissolved)	Weekly, when discharging	Monthly, when discharging	Grab
Iron (total)	Weekly, when discharging	Monthly, when discharging	Grab
Lead	Weekly, when discharging	Monthly, when discharging	Grab
Manganese (dissolved)	Weekly, when discharging	Monthly, when discharging	Grab
Mercury	Weekly, when discharging	Monthly, when discharging	Grab
Nickel	Weekly, when discharging	Monthly, when discharging	Grab
Selenium	Weekly, when discharging	Monthly, when discharging	Grab
Silver	Weekly, when discharging	Monthly, when discharging	Grab
Zinc	Weekly, when discharging	Monthly, when discharging	Grab

Minimum Monitoring (Continued)			
Parameter	Minimum Frequency		Sample Type
	During Pilot Study	All Other Periods	
VOCs			
Acetone	Weekly, when discharging	Monthly, when discharging	Grab
Benzene	Weekly, when discharging	Monthly, when discharging	Grab
2-Butanone	Weekly, when discharging	Monthly, when discharging	Grab
1,1-dichloroethene	Weekly, when discharging	Monthly, when discharging	Grab
cis-1,2-dichloroethene	Weekly, when discharging	Monthly, when discharging	Grab
Ethylbenzene	Weekly, when discharging	Monthly, when discharging	Grab
Tetrachloroethene	Weekly, when discharging	Monthly, when discharging	Grab
Toluene	Weekly, when discharging	Monthly, when discharging	Grab
Trans-1,2-dichloroethene	Weekly, when discharging	Monthly, when discharging	Grab
Trichloroethene	Weekly, when discharging	Monthly, when discharging	Grab
Vinyl chloride	Weekly, when discharging	Monthly, when discharging	Grab
Xylene	Weekly, when discharging	Monthly, when discharging	Grab
Phenols			
2-Chlorophenol	Weekly, when discharging	Monthly, when discharging	Grab
2,4-Dichlorophenol	Weekly, when discharging	Monthly, when discharging	Grab
2,4-Dimethylphenol	Weekly, when discharging	Monthly, when discharging	Grab
2-methyl-4,6-Dinitrophenol	Weekly, when discharging	Monthly, when discharging	Grab
2-methylphenol	Weekly, when discharging	Monthly, when discharging	Grab
2-nitrophenol	Weekly, when discharging	Monthly, when discharging	Grab
4-nitrophenol	Weekly, when discharging	Monthly, when discharging	Grab
2,4,5-Trichlorophenol	Weekly, when discharging	Monthly, when discharging	Grab
2,4,6-Trichlorophenol	Weekly, when discharging	Monthly, when discharging	Grab
Pentachlorophenol	Weekly, when discharging	Monthly, when discharging	Grab
Phenol	Weekly, when discharging	Monthly, when discharging	Grab

Notes:

- After receiving and reviewing the discharge data from several months of monitoring, the Department may make the determination that the monitoring of certain parameters will no longer be necessary, should continue, or assigning discharge limitations is warranted.
- The quantitation limits specified in the November 2007 DEQ memorandum pertaining to water quality quantitation limits must be addressed for each applicable parameter.